



TEMPLATE FOR FP6 PROJECT REVIEWS

*This template can be downloaded from the Internet at
<http://www.cordis.lu/fp6/project-management.htm>*

X

Individual report
Consolidated report

Thematic Priority/Activity	FP6-LIFESCIHEALTH
Instrument type	Integrated Project
Project no and acronym	018661 AutoCure
Project full title	Curing autoimmune disease. A translational approach to autoimmune diseases in the post-genomic era using inflammatory arthritis and myositis as prototypes and learning examples.
Project start date	March 1, 2006
Project duration	5 year
Project coordinator name and organisation	Lars Klareskog; Karolinska Institutet, Stockholm, Sweden
Period covered by report (from - to)	March 1, 2009 to February 28, 2010
Date of (review) meeting	June 28, 2010
Name(s) of reviewer(s)	Dominique Angèle Vuitton, MD, PhD
Name of reviewer drafting the report	Dominique Angèle Vuitton

Introduction

This template provides the structure for the review report that needs to be prepared after the project review. It can be completed on-line via the SESAM reporting tool (CIRCA username and password are required). Please go to <http://webgate.cec.eu.int/sesam> and click on "Review reports" on the upper left corner of the page. Alternatively, the template can be found in Word format at <http://www.cordis.lu/fp6/project-management.htm> and be completed off-line.

In completing Sections 2-8 of the report, independent reviewers should keep in mind that, in case they feel that they do not have the competence or the information to answer a question, they do not need to tick any of the boxes 'Yes', 'Partially', 'No' for that question, but they must complete the 'Comments' box.

If several reviewers are involved, it is preferable that a consolidated report be prepared by one reviewer chosen as 'rapporteur'.

The reporting requirements for FP6 projects are described in detail in the "Guidance notes on Project reporting in FP6" (downloadable from <http://www.cordis.lu/fp6/find-doc-management.htm#reporting>).

Questions to be answered by the reviewer(s)

1. OVERALL ASSESSMENT

a. Executive summary

Please follow the order of the individual sections of this report

Comments:

For its 4th year of existence, the AutoCure project seems to have reached maturity and, even not yet perfectly, made progress towards a real integration of the research teams. Objectives for the period have globally been achieved. Minor deviations have been due to unexpected findings or technical difficulties. Some delay occurred for some of the tasks, especially those in relation with SMEs; restructuration of the cooperation with the companies should improve the situation greatly. In addition, a few additional studies have completed the planned work to make the approach more comprehensive without significant changes in work load and/or budget. Progress beyond the state-of-the-art has been achieved by the consortium of AutoCure in many domains, which include markers of preclinical state, new diagnostic and prognostic markers, immunological mechanisms, gene predisposition, genomics in experimental animals and in patients, response to treatment and predictors of this response, mechanisms of action of novel immunomodulating drugs and impact of such drugs on health cost and quality of life, and last but not least, the confirmation on an important population of subjects and experimental models of the role of smoking in the emergence of the disease, in the severity of the disease and in the response to new therapies. The public health impact is thus quite high, and the close relationship between the researchers involved in AutoCure, the community of professionals involved in rheumatoid and autoimmune diseases, through EULAR, and the patients themselves reinforces this impact. The scientific production is impressive both in speciality journals and basic science and general journals, some of them quite prestigious. In addition significant papers on ethical issues have been published on sensitive issues. For the last year of the AutoCure project, partners involved in ethics intend to search the base for a consensus within Europe on how to handle ethical issues in biobank based research, which is a very good initiative. Researchers in ethics and clinical and basic research actors involved together in the AutoCure project are at the right place to propose such guidelines. Gender issues are also taken very seriously within the consortium.

Globally, resources have been deployed as foreseen. Specific costs to use new and more expensive techniques, but generating more interesting data, have been justified, as well as some increase in expenses due to higher number of patients included than expected. There is some discrepancy between the research work performed by Partner 29, as it can be deduced from the text, and the number of persons involved, and thus the allocation of resources, the second budget in size after Partner 1, coordinator.

Collaboration between partners was highly effective for some WP, actually leading to the “integration” objective of an “Integrated Project”. Common actions such as “Synoviomics” and “Pre-synoviomics”, GRACE, Meteor, the Euromyositis database, well illustrate such integration which likely makes the collection of well documented cases/samples of patients through AutoCure one of the most (the most?) important in the world. Further integration will be facilitated by the numerous activities/exchanges which involved young scientists within the AutoCure network all over Europe. Maintenance of the biobank and of the databases has been ensured by the lead partners, through EULAR, and through a funding by the Innovative Medicines Initiative (EC-EFPIA) which should make the continuation of the common work possible.

The plan for the last year is globally satisfactory. Some of the tasks were completed earlier than expected, some are delayed, but it may be anticipated that nearly all planned activities will actually be completed at the end of the project, with the exception of the commercialisation of assays/therapeutic agents. The decision made regarding the collaboration with the private companies should make a number of assays available as prototypes, and a few therapeutic targets/agents at the level of the “proof of concept”. Given the ambition of the project, and the important achievement in many other domains, including public health, this may be considered quite satisfactory.

- Good to excellent project (The project has fully achieved its objectives and technical goals for the period and has even exceeded expectations)
- Acceptable project (The project has achieved most of its objectives and technical goals for the period with relatively minor deviations)
- Unsatisfactory project (The project has failed to achieve critical objectives and/or is not at all on schedule)

b. Recommendations

Any effort to promote sustained collaboration between clinical and basic research teams and to maintain common biobanks and patient cohorts over the end of the AutoCure project should be encouraged.

As WP18 “Commercialisation” is rather short of any real “commercialisation” plan for diagnostic or therapeutic compounds, special attention should be given to this particular point, with the aim of bringing at least the most promising and cost effective assays for diagnostic/prognostic markers as close as possible to commercialisation, at the end of the project.

As far as new therapies are concerned, the situation of Partner 29 should be clarified. If the absence of proper description of its work is due to confidentiality issues, this should be clearly stated, if not, its budget should be reconsidered.

For the 5th and last year of the project, the coordinator and management team should be given some flexibility to adjust funding to the real needs of the research teams to achieve the most promising tasks.

The consortium website would merit some updating, and visibility of the AutoCure project within EULAR could be improved.

Technically, we may recommend the Work Management Group to better structure the final report, giving the main findings, difficulties if any, and perspectives, with the appropriate publications, similarly for all WP and Partners. The Periodic Management Report should not give detailed scientific results, but only list the main activities in which the teams were involved, with the aim of justifying expenses. The report should also give precision on how intellectual property has been managed in AutoCure, both for co-authoring and patents.

2. OBJECTIVES

a. Have the objectives for the period been achieved?

Yes

Partially

No

Comments:

Objectives for the period have globally been achieved. Minor deviations have taken unexpected findings or technical difficulties into account. In addition, a few additional studies have completed the planned work to make the approach more comprehensive without significant changes in work load and/or budget.

b. Are the overall objectives (i) still relevant and (ii) still achievable within the time and resources available to the project?

(i)

Yes

Partially

No

(ii)

Yes

Partially

No

Comments:

With the minor adjustments proposed by the partners, the overall objectives of the project are totally relevant and still achievable within the time and resources available.

c. Do you recommend changes in objectives in order to keep up with the current state-of-the-art?

Yes

Partially

No

Comments:

We may nearly say that the partners of AutoCure are currently those who are shaping the state-of-the-art...Progress beyond the state-of-the-art has been achieved by the consortium of AutoCure in many domains, which include markers of preclinical state, new diagnostic and prognostic markers, immunological mechanisms, gene predisposition, genomics in experimental animals and in patients, response to treatment and predictors of this response, mechanisms of action of novel immunomodulating drugs and impact of such drugs on health cost and quality of life, and last but not least, the confirmation on an important population of subjects and experimental models of the role of smoking in the emergence of the disease, in the severity of the disease and in the response to new therapies.

3. WORKPLAN AND RESOURCES

a. Has the project as a whole been making satisfactory progress in relation to the Description of Work (Annex I to the contract)?

Yes

Partially

No

Comments:

For most of its objectives, the project has made satisfactory progress, and results are often beyond initial expectations. Very few tasks/deliverables have been cancelled, and when so, a satisfactory explanation was given. Some delay occurred for some of the tasks, especially those in relation with SMEs; restructuration of the cooperation with the companies should improve the situation greatly. Conversely, some tasks were completed earlier than expected. In addition, a few studies have been added to the planned tasks, when they appeared very promising and/or were directly originating from a planned task result. The planned budget is adapted to these minor deviations.

b. Has each work package (WP) been making satisfactory progress in relation to the Description of Work (Annex I to the contract)?

Yes

Partially

No

Comments:

Very few WPs were significantly delayed. Usually, only a few tasks were delayed for technical reasons (as well as the consortium problems cited above) and the global plan for the WP was respected.

c. Have planned milestones and deliverables been achieved for the reporting period?

Yes

Partially

No

Comments:

Explanations for the few delays in Milestones and Deliverables are satisfactory; the rare cancellations are justified. In the table of Deliverables, some “actual/forecast delivery dates” were omitted (D11.1, 2, 3; D17.2); however, the text shows that the tasks were fulfilled. A number of deliverables were delivered earlier than expected, e. g. D12.1 to D12.9, which gives some flexibility to the research teams for the tasks to be accomplished in the last year. In the table of deliverables, D5 are missing. However, the text, albeit rather succinct, shows that the tasks have been fulfilled (15.1 to 15.6).

d. Have resources been deployed as foreseen in Annex I, overall and for each participant?

Yes

Partially

No

Comments:

Globally, resources have been deployed as foreseen. However, because of the move of R Holmdahl from Lund to Stockholm, most part of the resources that were earlier directed to the Lund partner have now been re-allocated to Karolinska Institutet. This is the major reason for the increased spending at the Karolinska Institutet. The relative spending from the previous partner (lead by Lars Klareskog) and the additional research group (R Holmdahl) is relatively unchanged.

e. Have costs incurred, i.e., personnel costs and other major cost items, been 1) necessary for the implementation of the project and 2) economic. Note that both aspects 1) and 2) have to be covered in the answer.

Yes

Partially

No

Comments:

Specific costs to use new and more expensive techniques, but generating more interesting data, have been justified, as well as some increase in expenses due to higher number of patients included than expected...We may also note that Partner 10 had less cost than expected, and could reasonably be partially compensated in case of need for Yr 5. There is some discrepancy between the research work performed by Partner 29, as it can be deduced from the text, and the number of persons involved, and thus the allocation of resources, the second budget in size after Partner 1, the coordinator.

f. For Networks of Excellence (NoEs) only:

f1. Is there evidence of real integration and restructuring of activities between partners (to be evaluated against Indicators of Integration, e.g., exchanges of personnel, shared infrastructures, joint research and training activities, changes of research orientation of individual partners to better integrate into the NoE, etc).

Yes

Partially

No

Comments:

f2. Does the joint research performed under the NoE as a whole continue to qualify as excellent?

Yes

Partially

No

Comments:

4. WORK PLANNED FOR THE NEXT 18-MONTH PERIOD (NoEs and IPs only)

Is the proposed update to the *Implementation Plan* (IPs) or *Joint Programme of Activity* (NoEs) for the next 18-month period satisfactory

a. from a scientific/technical point of view?

Yes

Partially

No

Comments:

The plan for the last and 5th year is globally satisfactory. Some of the tasks were completed earlier than expected, some are delayed, but it may be anticipated that nearly all planned activities will actually be completed at the end of the project, with the exception of the commercialisation of assays/therapeutic agents. The decision made regarding the collaboration with the private companies should make a number of assays available as prototypes, and a few therapeutic targets/agents at the level of the “proof of concept”. Given the ambition of the project, and the important achievement in many other domains, including public health, this may be considered quite satisfactory.

b. from a management point of view including use of resources?

Yes

Partially

No

Comments:

Appropriate resources are available for the last year of the project (there are some mistakes on the period considered in the tables, due to copy/paste problems!). The coordinator and management team should be given some flexibility to adjust funding to the real needs of the research teams to achieve the most promising tasks. After more than 4 years of common work, some changes in priorities/costs are inevitable.

c. concerning non-scientific activities (dissemination, exploitation, training, science-society issues, further integration etc)?

Yes

Partially

No

Comments:

No doubt that the “publication rate” will still increase for the last year of the project and beyond. The available biobank and collection of well documented cases (including early and “pre-onset” cases) will be a source of numbers of studies, made available by the availability of new techniques and concepts (some of them generated by AutoCure). Dissemination towards health professionals and the public/associations of patients has been well planned. Further integration will be facilitated by the numerous activities/exchanges which involved young scientists within the AutoCure network all over Europe. Maintenance of the biobank and of the databases has been ensured by the lead partners, through EULAR, and through a funding by the Innovative Medicines Initiative (EC-EFPIA) which should make the continuation of the common work possible.

5. CONSORTIUM PARTNERSHIP

a. Has the collaboration between the participants been effective?

Yes

Partially

No

Comments:

Collaboration was highly effective for some WP, actually leading to the “integration” objective of an “integrated project”. Common actions such as “Synoviomics” and “Pre-synoviomics”, GRACE, Meteor, the Euromyositis database, well illustrate such integration which likely makes the collection of well documented cases/samples of patients through AutoCure one of the most (the most?) important in the world. Collaboration between basic research teams seems to be more difficult: presentation of WP9, by partner, shows this difficulty, as well as the “single-team authorship” of most of papers. However, in several occasions, studies were performed by 2 partners and often more. And the plan for Year 5 shows that collaborations which were not anticipated at the beginning of the project have become effective, and technology transfer was successful.

b. Have the partners contributed as planned to the project and tasks assigned to them?

Yes

Partially

No

Comments:

Globally, all partners have perfectly contributed as planned to the project and tasks assigned to them. Delay in, and/or cancellation of, a task (very rare) have been explained properly. They could be expected, due to the “at risk” nature of some of the planned activities, to technical problems, or to a rapid evolution of concept/techniques. Some flexibility should be allowed to excellent teams, especially for a 5-yr long project.

c. Do you identify any conflicts or evidence of underperforming partners, lack of commitment or change of interest of any partners? Do you recommend any changes in responsibilities?

Yes

Partially

No

Comments:

Role, involvement and 5-yr budget of Partner 29 (Redoxis) should be clarified. Nearly same sentences are used to describe the work (done? To do?) in the 4-yr report, in WP9 and WP18, in the Periodic Management report and in WP9 in the 5-yr plan (unexpectedly, nothing is said regarding Partner 29 in WP18 in this plan...). As far as the objective 2 of WP9 is concerned (work in collaboration with Partner 9), it is stated that lipoplexes containing Ncf1 encoding plasmids had no effect on the clinical course of CIA in mice, thus, this “*questioned the relevance to pursue this approach*”. However, this is not discussed by Partner 29 in the 5-yr plan... From the content of the 4-yr report, it is impossible to understand the methodology followed (“high throughput”...but?) to find the “compounds” targeting the phagocyte NADPH oxidase complex and ROS production, which could be used in the future as therapeutic agents. The nature of these compounds, when and how they were characterized, and the exact task which is or will be performed by Partner 29 is never made clear. If an important issue regarding confidentiality is at stake, this should be said. As it is now, it just raises some question on the actual involvement of this partner, especially because its budget which was very high for Yr-4 is still rather important for Year 5.

6. MANAGEMENT

a. Has the scientific/technical management been performed as required?

Yes

Partially

No

Comments:

Globally, the scientific/technical management has ensured a smooth development of the research work and the organisation of fruitful meetings. AutoCure is a big consortium and the scientific excellence of the results is certainly a consequence of its good management together with the excellence of each team. Lack of homogeneity of the yearly report may, however, be stressed: depending on the WP, abundance of details, structure of the text, style, nature of content may vary greatly...Some sections are given twice (or more), with nearly the same words (e.g. WP 12 and 14; WP14 should have insisted on the “bioinformatics aspects”, novelties and difficulties, only, and not on the results, already given before...); which is confusing! Key indications are sometimes missing (such as the actual/forecast delivery date for a number of deliverables, which is important to follow the degree of completion of a task). We may recommend the Work Management Group to better structure the final report, giving the main findings, difficulties if any, and perspectives, with the appropriate publications, similarly for all WP and Partners. The Periodic management report should not give detailed scientific results, but only list the main activities in which the teams were involved, with the aim of justifying expenses.

b. Has the administrative and financial management been performed as required ((including proper handling of contractual matters, maintenance of the consortium agreement, intellectual property rights, technical collective responsibility, sub-contracting, competitive calls)?

Yes

Partially

No

Comments:

No details are given in the present report (Year 4) on the various contractual matters which have arisen: sub-contracting with Phadia? Other changes in the contracts of SMEs? New partnership with Proimmune? There is nothing given on the management of intellectual property: was there any trouble with authorship (as mentioned below, a majority of publications are authored by members of a single team: is this normal and/or well accepted? what were the rules for those publications which are co-signed by several partners?) Is the absence of clear methods/results regarding the work by Partner 29 due to confidentiality issues? Some patent applications are mentioned: were there any difficulties to manage IP? This aspect should certainly be considered in the final report of the project, next year.

c. Have (electronic) information and communication networks been established as required to support interactive working between the teams involved (if relevant)?

Yes

Partially

No

Comments:

The website www.autocure.org has been maintained to facilitate interactive working between the teams, through the subsite Fronter. Additional comments on the website are under Dissemination.

d. Is the consortium interacting in a satisfactory manner with other related 5th and 6th Framework projects or other R&D national/international programmes (if relevant)?

Yes

Partially

No

Comments:

Links are particularly close with the Masterswitch project.

7. USE AND DISSEMINATION OF KNOWLEDGE

a. Does the project have significant use potential (if applicable)?

Yes

Partially

No

Comments:

The project has already generated a lot of potential markers for diagnosis, follow-up and response to treatment and it is sure that the last year will even bring more... Regarding therapeutic agents, the prevision of the partners may have been a bit too optimistic for the time frame of the project. But no doubt that the identification of interesting targets and potential agents has already begun and the beginning of a “proof of concept” may be expected for some of them at the end of next (and last) year of the project.

WP18 “commercialisation” is, for now, rather short of any real “commercialisation” plan for diagnostic or therapeutic compounds. The history of companies’ involvement in the project since its beginning is not fully clear for the reviewer! Problems with BMD (which has disappeared from WP18 activities in the plan for the next year)? Partnership with Proimmune (apparently productive)? Exact position of Phadia (which also seems to have been very active recently), as a subcontractor or a partner (does not seem so...)? Real work performed by Redoxis (to be clarified)?

The economic evaluation, considered by WP20, has given interesting clues to the question of the economic impact of the introduction of new therapies such as anti-TNF agents; such studies should be extended to other geographic areas and other health systems. The consortium should also think of the economic impact, in terms of public health cost, of the development of the new diagnostic/follow-up tools that they have found and intend to commercialise. Selection and validation of these tools is crucial to a proper management of the patients; adding rather than replacing old tools (especially regarding auto-antibodies) for the diagnosis and follow-up of autoimmune diseases has been the rule in the past 30 years... It would be timely to commercialise only those which have the best value, as tested and validated on a huge panel of patients, as it is possible within AutoCure, and give precise guidelines to clinicians.

b. Is the Plan for the Use and Dissemination of Knowledge developing in a satisfactory manner?

Yes

Partially

No

Comments:

Dissemination of research results is very well handled. Communications in international/national congresses are numerous. More than 100 publications in international journals, most of them of very high level (including Nature Genetics, Science, PNAS, the Lancet...) show the impressive scientific production of the consortium.

c. Have the contractors disseminated project results and information as foreseen by the contract and the plan for dissemination and use of knowledge (publications, conferences...)?

Yes

Partially

No

Comments:

From the list of publications/communications/dissemination activities (which could have been classified better in the report...) we may find 59 full articles or book chapters published or in press in “speciality journals” (dealing with rheumatology, autoimmune diseases), and 44 in “basic sciences or general journals” (dealing with molecular biology, immunology, genomics but also ethics). However, among the documented articles (in ANNEX 1), 67 are authored by a single team, and only 32 include authors from at least 2 teams (23 are listed as coming from 6 partners...but have sometimes 5 authors or less). This perhaps points out that the scientific production has not yet reached the degree of “European integration of research” which was one of the objectives of the “Integrated Projects”. It may be noted that the mention “*members of the AutoCure project*”, or similar expression never appears at the end of the list of authors; this is a common way to acknowledge the work of those people in the consortium who participated in the study (for instance through patients’ samples) and are not among the “authors”, in other EC-funded projects...

The dedicated meetings/training courses organised within the framework of AutoCure are quite appropriate, and we may believe the authors of the report when they stress the involvement of young researchers and their will to go on with common research activities on RA and related auto-immune diseases.

d. Are potential users and other stakeholders (outside the consortium) suitably involved (if applicable)?

Yes

Partially

No

Comments:

The consortium insists on its close links with EULAR, which is among the partners, but with no budget? Actually, several among its leaders are key-persons in EULAR, especially in the specific group on genomics. Several communications/invited lectures by AutoCure researchers have been presented at EULAR congresses, and still are in Rome, June 2010. EULAR and its yearly congresses are certainly a good dissemination channel for AutoCure. However, visiting EULAR website (especially the “EU affairs” section, then “Research policy”...) does not give the impression that EC-funded projects, including AutoCure, are well “visible”. We eventually find AutoCure well hidden behind several clicks under “Activities”...

The website of the consortium www.autocure.org is obviously more dedicated to internal use by researchers than to the public/stakeholders. It gives information on the project, but most of the sections are outdated (such as an incomplete list of publications for 2009, no for 2010, a call for a new “SME” partner, which is certainly over, a call for research technicians...with a dead-line in 2006 etc.).

The initiative of “Patient Research Partners” is excellent, but limited to Sweden; belonging to the AutoCure consortium should give an incentive to develop such partnership in other countries.

8. OTHER ISSUES

a. Have policy-related and/or regulatory issues been properly handled (if applicable)?

Yes

Partially

No

Comments:

No specific comment on this subject.

b. Have ethical issues been appropriately handled (if applicable)?

Yes

Partially

No

Comments:

WP 17 is totally dedicated to Bioethics, which is a very sensitive issue for such a project, since most of the research materials comes from patients, with the objective to make samples and clinical history of these patients available to the community of researchers. Significant papers on ethical issues have been published on the most important subjects, including in prestigious scientific journals (such as Science). For the last year of the AutoCure project, partners involved in this WP intend to search the base for a consensus within Europe on how to handle ethical issues in biobank based research, which is a very good initiative. Biobanks have become essential to fully use the potential of new discoveries brought by patients' and healthy subjects' samples, especially in all "omics" aspects of research. "Crossing data bases" with accuracy while keeping the anonymity and consent of the thousands of subjects included in the repositories generated by the EC-funded research projects in the recent years has become a challenge, as well as finding a balance between the respect of individual decision and public health imperatives. Researchers in ethics and clinical and basic research actors involved together in the AutoCure project are at the right place to propose such guidelines.

c. Have safety issues been properly handled (if applicable)?

Yes

Partially

No

Comments:

There are no specific difficulties in this field, and potential safety issues seem to have been managed properly.

d. Has progress on the Gender Action Plan been satisfactory (if applicable for this reporting period)?

Yes

Partially

No

Comments:

Actions on gender issues within AutoCure are unexpectedly given in the “WP18. Commercialisation” section of the report (presumably because of the presence of The PI of ArthroGen, Dr. Margriet Vervoordeldonk in the Gender Task Force of AutoCure...). This Task Force appears to be particularly active, and gender issues have been the subject of one of the Newsletter of the consortium ‘AutoCurious’, of special display on the website, and specific presentations have been given at internal and external meetings. The subject is thus taken very seriously.

Name (s) of the reviewer(s): Prof. Dominique Angele VUITTON, MD, PhD.

Date: 29 Juin 2010

Signature(s):

A handwritten signature in black ink, appearing to read 'D. Angele Vuitton', is displayed within a white rectangular box.

APPENDICES to the reviewers report (optional)

a. Status of project reports and deliverables (columns (a)-(h) to be pre-filled by the Project Officer; columns (i)-(m) to be completed by the reviewer)

Del no. (a)	Deliverable name (b)	WP no. (c)	Lead participant (d)	Estimated indicative person-months* (e)	Nature (f)	Dissemination level (g)	Delivery date from DoW (proj. month) (h)	Used indicative person-months (i)	Actual/Forecast delivery date (j)	Status (k)	Resubmission date (l)	Remarks (m)

*) if available

b. Visibility Actions *(to be completed by the Project Officer)*

Mark which actions would be appropriate for follow-up by EC programme policy units:

- Exploitation Strategy Seminar
- Contact the Innovation Relay Centres
- Promote / highlight as a success/case story

Flag this project for in case the programme looks for projects with certain characteristics:

- high visibility/media attractive project;
- project with an impact on EU policies;
- project with a major role for women;
- project with a significant impact on health, safety, environment;
- project with ethical issues associated.
- substantial breakthrough character
- significant impact on employment
- significant participation from outside EU
- involvement of the top researchers in the field
- involvement of the top economic actors in the field